



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

4949A Cox Road, Glen Allen, Virginia 23060

(804) 527-5020 Fax (804) 527-5106

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Michael P. Murphy
Regional Director

DRAFT November 26, 2012

Mr. Timothy Loveland
General Manager
King and Queen Sanitary Landfill
BFI Waste Systems of Virginia, LLC
4443 Iris Road
Little Plymouth, VA 23091

Location: King and Queen
Registration No: 40937
AIRS ID No: 51-097-00017

Dear Mr. Loveland:

Attached is a permit modification to the new source review permit dated May 26, 2010 to modify and operate a municipal solid waste landfill in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. This permit supersedes your permit dated May 26, 2010. This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on November 14, 2012 and solicited written public comments by placing a newspaper advertisement in "The Tidewater Review" on December 19, 2012. A public briefing/hearing was held on January 23, 2013 with TBD/no comments received. The required comment period, provided by 9 VAC 5-80-1170 D expired on February 8, 2013.

This permit modification shall not relieve BFI Waste Systems of Virginia, LLC of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-200 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please call the regional office at (804) 527-5020.

Sincerely,

James E. Kyle, P.E.
Air Permits Manager

JEK/hll/40937NSRpermit11262012.docx

Attachment: Permit
40 CFR 60 Subpart WWW
40 CFR 63 Subpart AAAA
67 FR 36476 (May 23, 2002 – NSPS WWW Clarification)
71 FR 174 (September 8, 2006 – NSPS WWW/NESHAP AAAA Clarification)
40 CFR 60, NSPS Subpart IIII (for information only)

cc: Director, OAPP (electronic file submission)
Data Analysis (electronic file submission)
Chief, Air Enforcement Branch, USEPA Region III (electronic file submission)



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Regional Director

STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

This permit includes designated equipment to New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants for Source Categories.

This permit supersedes the permit dated May 26, 2010

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

King and Queen Sanitary Landfill
BFI Waste Systems of Virginia, LLC
2001 Charles City Road
Richmond, VA 23231
Registration No.: 40937
County-Plant ID No.: 097-00017

is authorized to modify and operate

a municipal solid waste landfill and
a gas collection and control system

located at

4443 Iris Road
Little Plymouth, Virginia 23091

in accordance with the conditions of this permit.

Approved on TBD 1, 2013.

Kyle Ivar Winter, P.E.
Deputy Regional Director

Permit consists of 19 pages.
Permit Conditions 1 to 40.

INTRODUCTION

This permit approval is based on the permit application dated July 6, 1998; including amendment information dated September 11, 1998 and December 18, 1998; and permit application dated October 13, 2003, including amendment information dated January 29, 2004 and application dated November 13, 2008 and received on December 4, 2008 and permit application received on April 7, 2010 and supplemental information received on May 26, 2010 and permit application received on July 2, 2010 and supplemental information received on October 12, 2011, June 18, 2012 (received on July 13, 2012) and November 14, 2012. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action. In addition, this facility may be subject to additional applicable requirements not listed in this permit.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

1. Equipment List - Equipment at this facility consists of the following:

Equipment to be constructed				
Reference No.	Equipment Description	Rated Capacity	Federal Requirements	Permit Date
SF1-SF8	Up to Eight (8) Solar Flares	(1.5 Million BTU/Hr) =<400 scfm Total	-	TBD, 2012
Equipment to be modified				
P01	Municipal Solid Waste Landfill	GCCS (56.19 million Mega-grams) 61,940,000 cubic yards	40 CFR 60, subpart WWW 40 CFR 63 Subpart AAAA	May 26, 2010

PCD-01	Open Flare System (LFG Specialties, Inc.)	(90 Million BTU/Hr) 3,000 scfm maximum	40 CFR 60, subpart WWW 40 CFR 63 Subpart AAAA	May 26, 2010
PCD-03	Enclosed Flare System (John Zink)	(180 Million BTU/Hr) 6,000 scfm maximum	40 CFR 60, subpart WWW 40 CFR 63 Subpart AAAA	May 26, 2010

(9 VAC 80-1180 D 3)

2. **Design Capacity** - The design capacity of the MSW sanitary landfill, which includes Phases 1, 2, 3, 4, and 5 is 56.19 million mega-grams (61,940,000 cubic yards). A change in the design capacity may require a State Air Pollution Control Board permit to construct and operate.

(9 VAC 5-50-390, 9 VAC 5-50-260 and 9 VAC 5-80-1180)

3. **LFG Collection and Control System: Design and Operational Standards** - The permittee shall operate the active landfill gas (LFG) collection and control system in the following manner:
 - a. Design the system to handle the maximum expected gas flow rate from Phases 1, 2, 3, 4, and 5, which has been calculated to be 4,935,909,600 cubic feet per year, using the procedures listed in 40 CFR 60.755(a)(1). The maximum expected gas flow rate shall be recalculated when design capacity is increased or additional cells other than those listed are proposed for landfill expansion and the LFG system shall be redesigned to handle the maximum expected gas flow rate from the entire area of the landfill;
 - b. Collect gas from each area, cell or group of cells in which initial solid waste has been in place for a period of:
 1. 5 years or more if active;
 2. 2 years or more if closed or at final grade;
 - c. Collect gas at a sufficient extraction rate. Upon maturation of the landfill and full implementation of the gas collection system, the gas collection system shall meet the requirements of 40 CFR 60.753.
 - d. Operate each wellhead under negative pressure except as provided in 40 CFR 60.753 (b).

- e. Operate each interior wellhead in the collection system such that it has a landfill gas temperature less than 55°C and has either a nitrogen content less than 20 percent, as determined by EPA Method 3C; or an oxygen content less than 5 percent, as determined by EPA Method 3A. The permittee may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.
- f. Design the system to minimize off-site migration of subsurface gas by installing liners meeting the requirements listed in 40 CFR 258.40 for Phases 1, 2, 3, 4, and 5;
- g. Route the collected landfill gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system is subject to the requirements listed in h and i; or
- h. Control landfill gas emissions by routing the collected landfill gas to the open flare or the enclosed flare. The open flare must meet the criteria in 40 CFR 60.18;
- i. Maintain the methane concentration at the surface of the landfill at less than 500 ppmv above the background level.

A change in the control system to those listed in items g, h and i may require a permit to modify and operate.

(9 VAC 5-50-410, 9 VAC 5-50-260 and 9 VAC 5-80-1180)

- 4. **Flare Requirements** - The PCD-01 open flare and PCD-03 enclosed flare shall be subject to the following requirements listed in 40 CFR 60.18 and 40 CFR 60.756.
 - a. A non-assisted flare type shall be installed.
 - b. The net heating value for the landfill gas being combusted shall be 200 BTU/SCF or greater and determined according to methods listed in 40 CFR 60.18(f)(3) or other methods approved by EPA, Region III.
 - c. The exit velocity shall be less than 60 FT/SEC except when the net heating value for the landfill gas is greater than 1,000 BTU/SCF or the exit velocity is less than V_{MAX} and less than 400 FT/SEC. The exit velocity shall be determined using the applicable methods listed in 40 CFR 60.18(f)(4) and 40 CFR 60.18(f)(5) or methods approved by EPA, Region III.
 - d. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, shall be installed at the open flare's pilot light or the flame itself to indicate the continuous presence of a flame.

- e. The enclosed flare shall have a temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of ± 1 percent of the temperature being measured expressed in degrees Celsius or ± 0.5 degrees Celsius, whichever is greater.
- f. A gas flow-meter shall be installed, calibrated, and maintained to record the landfill gas flow to the flares at minimum every 15 minutes.

(9 VAC 5-50-410, 9 VAC 5-50-260 and 9 VAC 5-80-1180)

- 5. **Flare Requirements** –The PCD-03 enclosed flare shall achieve a control efficiency by stack test for NMOCs of no less than 98 percent, on a mass basis or reduce C_{NMOC} to 20 ppmvd or less, dry basis as hexane at three percent oxygen.

(9 VAC 5-50-410, 9 VAC 5-50-260, 9 VAC 5-80-1180 and 40 CFR 60.752(b)(2)(iii)(B))

- 6. **Dust Emission Control** - Unless otherwise specified, dust emission controls shall include the following or equivalent as a minimum:

- a. Dust from grading, cell construction, waste compaction, application of daily cover, wood waste chipping operations, storage piles and traffic areas shall be controlled by wet suppression or equivalent (as approved by the DEQ) control measures.
- b. All material being stockpiled shall be kept moist to control dust during storage and handling, or covered to minimize emissions.
- c. Dust from haul roads shall be controlled by wet suppression and prompt removal of dried sediment resulting from soil erosion and dirt spilled or tracked onto paved surfaces within the landfill.
- d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-50-90, 9 VAC 5-50-260 and 9 VAC 5-80-1180)

OPERATIONAL STANDARDS

7. **Operational Requirements** – The permittee shall demonstrate compliance with operational standards for the landfill gas collection and control system required by Subpart WWW (40 CFR 60.753) in accordance with appropriate subsection(s) of Subpart WWW (40 CFR 60.755). The permittee shall demonstrate compliance with the landfill gas collection and control system requirements of Subpart WWW (40 CFR 60.752) in accordance with appropriate subsection(s) of Subpart WWW (40 CFR 60.755). All reports required to demonstrate compliance with the compliance requirements of Subpart WWW (40 CFR 60.755) shall be prepared and submitted to the Piedmont Regional Office as required by Subpart WWW (40 CFR 60.755).

(9 VAC 5-80-1180 and 9 VAC 5-50-410)
8. **Gas Collection and Control Design Plan** – The permittee shall submit a revised gas collection and control system design plan that accounts for the added flare capacity as required by NSPS Subpart WWW (40 CFR 60.753). The revised gas collection and control design plan or a letter addendum shall be submitted to the Director, Piedmont Region for approval by TBD 1, 2013.

(9 VAC 5-80-1180 and 9 VAC 5-50-410)
9. **Operation of Landfill** - Except where this permit is more restrictive than the applicable requirement, the MSW landfill shall be constructed and operated in accordance with 40 CFR 60, Subpart WWW and 40 CFR 63, Subpart AAAA.

(9 VAC 5-60-100, 9 VAC 5-50-410 and 9 VAC 5-80-1180)
10. **Operation of LFG Collection and Control System** - The gas control shall be in operation at all times when the collected gas is routed to the system. The gas mover system shall be shut down and all valves in the collection and control system allowing atmospheric venting of landfill gases shall be closed within 1 hour if the collection or control system is inoperable, unless landfill gases are being diverted offsite as required by NSPS Subpart WWW (40 CFR 60.753).

(9 VAC 5-50-410, 9 VAC 5-50-260 and 9 VAC 5-80-1180)
11. **Fuel** - The approved fuel for the PCD-01 and PCD-03 flares is landfill gas. The approved fuel for the SF1-SF8 odor control flares is fugitive landfill gas. Each flare may also use propane gas to ignite the pilot flame in each flare. A change in fuel may require a permit to modify and operate.

(9 VAC 5-50-50, 9 VAC 5-50-260 and 9 VAC 5-80-1180)

12. **Fuel** – The PCD-01 open flares shall consume no more than 886,161,600 cubic feet of landfill gas per year, calculated monthly as the sum of each consecutive 12 month period. The PCD-03 enclosed flare shall consume no more than 3,153,600,000 cubic feet of landfill gas per year, calculated monthly as the sum of each consecutive 12 month period. The SF1-SF8 odor control flares shall consume no more than 3,504,000 scfm of fugitive landfill gas, calculated monthly as the sum of each consecutive 12 month period.

(9 VAC 5-50-260 and 9 VAC 5-80-1180)

EMISSION LIMITATIONS

13. **Visible Emission Limit** – The SF1-SF8 odor control flares, PCD-01 open flare and PCD-03 enclosed flare shall be operated with no visible emissions, as determined by EPA Method 22, except for periods not to exceed a total of 5 minutes during two consecutive hours. This condition applies at all times except during startup, shutdown and malfunction.

(9 VAC 5-50-260 and 9 VAC 5-80-1180)

14. **Emission Limits** - Emissions from the operation of the 3000 scfm PCD-01 open flare shall not exceed the limits specified below:

Particulate Matter	1.5 lbs/hr	3.8 tons/yr
PM ₁₀	1.5 lbs/hr	3.8 tons/yr
PM _{2.5}	1.5 lbs/hr	3.8 tons/yr
Sulfur Dioxide	1.4 lbs/hr	3.4 tons/yr
Nitrogen Oxides	6.1 lbs/hr	15.1 tons/yr
Carbon Monoxide	33.3 lbs/hr	82.0 tons/yr
Non-Methane Organic Compounds	0.5 lbs/hr	1.3 tons/yr
Volatile Organic Compounds	0.2 lbs/hr	0.5 tons/yr

(9 VAC 5-50-260 and 9 VAC 5-80-1180)

15. **Emission Limits** - Emissions from the 6000 scfm PCD-03 enclosed flare shall not exceed the limits specified below:

Particulate Matter	3.0 lbs/hr	13.4 tons/yr
PM ₁₀	3.0 lbs/hr	13.4 tons/yr
PM _{2.5}	3.0 lbs/hr	13.4 tons/yr
Sulfur Dioxide	2.8 lbs/hr	12.1 tons/yr
Nitrogen Oxides	10.8 lbs/hr	47.3 tons/yr
Carbon Monoxide	36.0 lbs/hr	157.7 tons/yr
Non-Methane Organic Compounds	1.0 lbs/hr	4.3 tons/yr
Volatile Organic Compounds	0.4 lbs/hr	1.7 tons/yr

(9 VAC 5-50-260 and 9 VAC 5-80-1180)

16. **Emission Limits** - Emissions from combined flare operation of SF1-SF8, PCD-01 and PCD-03 shall not exceed the limits specified below:

Particulate Matter	4.8 lbs/hr	18.1 tons/yr
PM ₁₀	4.8 lbs/hr	18.1 tons/yr
PM _{2.5}	4.8 lbs/hr	18.1 tons/yr
Sulfur Dioxide	4.2 lbs/hr	16.3 tons/yr
Nitrogen Oxides	17.0 lbs/hr	64.5 tons/yr
Carbon Monoxide	69.6 lbs/hr	248.5 tons/yr
Non-Methane Organic Compounds	1.5 lbs/hr	5.8 tons/yr
Volatile Organic Compounds	0.6 lbs/hr	2.3 tons/yr

(9 VAC 5-50-260 and 9 VAC 5-80-1180)

17. **Determination of NMOC Concentration and LFG Flow Rate** - After the installation of a gas collection and control system in compliance with 40 CFR 60.755, the permittee shall determine the actual NMOC concentration and LFG flow rate and shall calculate the NMOC emission rate in accordance with 40 CFR 60.754 (b) for reporting the uncontrolled NMOC emission rate for when the GCCS can be removed.

(9 VAC 5-50-410 and 9 VAC 5-80-1180)

MONITORING

18. **LFG Collection System Monitoring Requirements** - The operation of the gas collection system shall be monitored as required by NSPS Subpart WWW (40 CFR 60.756) as follows:

- a. The following items shall be monitored each month:
 1. Gauge pressure, each well.
 2. LFG temperature, each well.
 3. Nitrogen concentration or oxygen concentration, each well.
 4. Cover integrity.
- b. The methane concentration at the landfill surface shall be monitored at least once every quarter. Any closed landfill that has no monitored exceedances of the operational standard in three consecutive quarterly monitoring periods may skip to annual monitoring. Any methane reading of 500 ppm or more above background detected during the annual monitoring returns the frequency for that landfill to quarterly monitoring.

(9 VAC 5-50-410 and 9 VAC 5-80-1180 D)

19. **LFG Control System Monitoring Requirements** - The operation of the gas control system shall be monitored as required by NSPS Subpart WWW (40 CFR 60.756) as follows:

- a. Landfill gas flow, recorded at least once every 15 minutes for each flare (PCD-01 and PCD-03).
- b. The presence of the pilot flame or the flare flame shall be continuously monitored by a heat sensing device and recorded for the PCD-01 open flare when landfill gas is being vented to the open flare.
- c. Control efficiency of the PCD-03 enclosed flare with respect to NMOC destruction or the C_{NMOC} at the flare stack based on the latest test results, using a calculation method approved by the Piedmont Regional Office.

(9 VAC 5-50-410 and 9 VAC 5-80-1180 D)

20. **Corrective Actions** - If monitoring demonstrates that the requirements of Conditions **3** (c), (d), (e), (f), (g), (h), or (i) are not being met, corrective actions shall be taken as specified in 40 CFR 60.755 (a) (3) through (5) or 40 CFR 60.755 (c). If corrective actions are taken as specified in 40 CFR 60.755(c)(4), the monitored exceedance for the surface methane operational standard is not a violation of the operational requirements of this permit or 40 CFR 60, Subpart WWW.

(9 VAC 5-50-410 and 9 VAC 5-80-1180 D)

21. **Monitoring Equipment** – All monitoring equipment required to comply with 40 CFR 60.756 shall be installed and operational by 180 days of the date of initial operation of the landfill gas collection and control system. Performance evaluation of the monitoring equipment shall take place during the initial performance test under 40 CFR 60.752 and 40 CFR 60.754 or within 30 days thereafter. Two copies of the performance evaluation report shall be submitted to the Piedmont Regional Office within 45 days of the initial performance evaluation. Verification of satisfactory operation of monitoring equipment shall, at a minimum, include certification that manufacturer's written requirements or recommendations for installation, operation, and calibration of the devices have been followed.

(9 VAC 5-50-40, 9 VAC 5-50-410 and 9 VAC 5-80-1180 D)

22. **NSPS and MACT Requirements** - The landfill gas collection and control system shall be monitored and all appropriate data recorded as required in 40 CFR 60.756 and 40 CFR 63.1930.

(9 VAC 5-50-40 and 9 VAC 5-50-410 and 9 VAC 5-80-1180 D)

RECORD KEEPING

23. **On-Site Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:
- a. Current maximum design capacity, current amount of refuse in place, and year by year refuse accumulation rates.
 - b. Description, location, amount, and placement date of all non-degradable refuse including asbestos, demolition-refuse, and coal ash placed in landfill areas that are excluded from landfill gas estimation or landfill gas collection and control.
 - c. Installation date and location of all newly installed wells, horizontal gas collectors, and surface gas collectors.

- d. Map or plot showing each existing and planned well, horizontal gas collector, and surface collector in the gas collection system with each well and collector uniquely identified.
- e. Maximum expected gas generation flow rate calculated according to 40 CFR 60.755(a)(1).
- f. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures listed in 40 CFR 60.759(a)(1).
- g. The type of open flare (i.e. steam-assisted, air-assisted, or non-assisted) used, all visible emission readings, the heat content determination, gas flow rate measurements, and exit velocity determinations made during the required performance tests (completed) for the PCD-01 open flare.
- h. The flare pilot flame or flare flame continuous monitoring in the flare stack for PCD-01 the open flare. The flame monitoring record for the PCD-03 enclosed flare.
- i. All periods of operations when landfill gas is being vented to the PCD-01 open flare during which the pilot flame or flare flame is absent for the PCD-01 open flare.
- j. The monthly monitored gauge pressure, temperature, and nitrogen or oxygen concentration for each well.
- k. The results from the monthly cover integrity monitoring and the date of cover repair.
- l. The quarterly monitored methane concentration at the landfill surface and the surface monitoring plan developed for the quarterly monitoring which includes a topographic map with the monitoring route at 30 meter intervals and the rationale for any site-specific deviations from the required intervals.
- m. The landfill gas flow, recorded at least once every 15 minutes for the PCD-01 open flare and PCD-03 enclosed flare.
- n. All exceedances for the monitoring requirements listed in Conditions **3** and **20**, the results from any subsequent readings of an exceedance parameter, the location of the exceedance, and the action taken to correct the exceedance.
- o. All decommissioned wells and supporting documentation to show the reason for decommissioning each well.
- p. Any inoperable periods exceeding 1 hour for the collection or control system.

- q. The yearly throughput of landfill gas to the open flare PCD-01 and the enclosed flare PCD-03, calculated monthly as the sum of each consecutive 12 month period. The yearly throughput of fugitive landfill gas to the solar powered flares (L09), calculated monthly as the sum of each consecutive 12 month period.
- r. Date of first waste placement for Phases 1, 2, 3, 4, and 5.
- s. Calculations detailing the estimated annual site specific density and maximum design capacity.
- t. A copy of the most recent approved gas collection and control system design plan.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50, 9 VAC 5-50-410 and 9 VAC 5-80-1180)

REPORTING

24. **Initial Compliance Report** – The permittee shall submit, within 180 days of the initial startup of the LFG collection and control system, an initial compliance report as required by NSPS Subpart WWW (40 CFR 60.757) containing, at a minimum, the following:
- a. A diagram of the collection system showing all wells, horizontal collectors, or other gas extraction devices, any areas excluded from gas collection and proposed sites for future collection system expansion;
 - b. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;
 - c. The documentation of the presence of asbestos or non-degradable material from each area from which collection wells have been excluded based on the presence of asbestos or non-degradable material.
 - d. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on non-productivity and the calculations of the gas generation flow rate for each excluded area;
 - e. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill;
 - f. The provisions for the control of off-site migration;

- g. For enclosed combustion devices:
 - (i) Average combustion temperature, measured at least once every fifteen minutes and averaged over the duration of the performance test.
 - (ii) Percent reduction of NMOC's by the control device, and supporting test documentation.
 - (iii) All visible emissions readings.
- h. An NMOC emission rate report within one year after the first annual emission rate of NMOC exceeds 50 mega-grams per year.

This report shall be submitted annually until after installation of the gas collection and control system required by Condition **3**.

(9 VAC 5-50-50, 9 VAC 50-410 and 9 VAC 5-80-1180)

25. **Annual Compliance Report** – The first annual compliance report shall be submitted within 180 days of start-up of the collection and control system and shall contain the following:

- a. The initial compliance report required by Condition **24**.
- b. Value and length of time for exceedance of applicable parameters monitored under 60.756(a), (b), (c), and (d).
- c. Description and duration of all periods when the control device was not working for a period exceeding 1 hour and length of time control device was not operating.
- d. All periods when the collection system was not operating in excess of 5 days.
- e. The location of each exceedance of the 500 parts per million surface methane concentrations, and the concentration recorded at each location for which an exceedance was recorded as provided in 60.755(c).
- f. The date of installation and the location of each well or collection system expansion added pursuant to paragraph (a)(3), (b), and (c)(4) of 60.755.

Items (b) through (f) shall be submitted annually. The second annual report shall cover the period from the initial annual report to the end of the calendar year. Subsequent annual reports shall cover the calendar year. The second and all subsequent annual reports shall be submitted by March 1 of the following calendar year.

(9 VAC 5-50-50, 9 VAC 5-50-410 and 9 VAC 5-80-1180)

26. **Closure Report** - The permittee shall submit a closure report to the Director, Piedmont Regional Office within 30 days of the date the MSW landfill stopped accepting waste as required by 40 CFR 60 Subpart WWW.

(9 VAC 5-50-50, 9 VAC 5-50-410 and 9 VAC 5-80-1180)

27. **Control Equipment Removal Report** - The permittee shall submit an equipment removal report to the Director, Piedmont Regional Office 30 days prior to the removal or cessation of operation of the control equipment.

(1) The equipment removal report shall contain all of the following items:

- (i) A copy of the closure report submitted in accordance with 40 CFR 60.757(d);
 - (ii) A copy of the initial performance test report demonstrating that the 15 year minimum control period has expired; and
 - (iii) Dated copies of three successive NMOC emission rate reports demonstrating that the landfill is no longer producing 50 mega-grams or greater of NMOC per year [when completed].
- (2) The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 60.752(b)(2)(v) below have been met.

The collection and control system may be capped or removed provided that all the conditions of paragraphs 40 CFR 60.752(b)(2)(v) (A), (B), and (C) are met:

- (A) The landfill shall be a closed landfill as defined in 40 CFR 60.751. A closure report shall be submitted to the Administrator as provided in 40 CFR 60.757(d);
- (B) The collection and control system shall have been in operation a minimum of 15 years; and
- (C) Following the procedures specified in 40 CFR 60.754(b), the calculated NMOC gas produced by the landfill shall be less than 50 mega-grams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

(9 VAC 5-50-50, 9 VAC 5-80-1180,,60.752(b)(2)(v), 40 CFR 60.757(d - e))

28. **Annual Emission Report for Fee Calculation** - The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the department.

(9 VAC 5-80-340(C))

29. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations.

(9 VAC 5-50-30 F)

FACILITY WIDE CONDITIONS

30. **National Emissions Standards for Hazardous Air Pollutants (Municipal Solid Waste Landfills)** - The Landfill 'MACT' (40 CFR 63 Subpart AAAA), published January 16, 2003, includes the following additional requirements for affected MSW landfills.

- a. Those affected sources defined as 'existing landfills' shall be in compliance with the specific items included in 40 CFR Part 63, Subpart AAAA by January 16, 2004.
- b. A "Startup, shutdown and malfunction" (SSM) Plan shall be developed and implemented for the facility. A copy shall be available on site for inspection by the DEQ and shall contain all revisions for the most recent five (5) years. (40 CFR 63.6(e)(3) and 40 CFR 63.1960)
- c. Annual reports of the operation of the GCCS, as required by the NSPS, Subpart 60.757(f), will be required semi-annually beginning with the first report after the compliance date of January 16, 2004. The time periods to be addressed are January 1 to June 30 and July 1 to December 31. (40 CFR 63.1980)
- d. Semiannual reports are required by 40 CFR 63, Subpart AAAA and 40 CFR 63.10(d)(5). The time periods to be addressed are January 1 to June 30 and July 1 to December 31. SSM Reports shall be submitted on March 1 and September 1 of each calendar year. The SSM plan should include the following:
 1. Each SSM event and a description of how thorough the facility complied with each item contained in the SSM Plan.
 2. Inconsistent actions taken by the facility during an SSM event must be recorded within two working days of the event and a letter must be submitted to the Administrator within seven days of the event.
 3. Any new actions that are indicated as appropriate during an SSM event shall be incorporated in a new SSM Plan.
 4. Any revisions to the SSM Plan for the period.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-60-90, 9 VAC 5-80-1180 and 40 CFR 63.1930 through 63.1990)

GENERAL CONDITIONS

31. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:
- a. Knowingly makes material misstatements in the permit application or any amendments to it;
 - b. Fails to comply with the conditions of this permit;
 - c. Fails to comply with any emission standards applicable to a permitted emissions unit;
 - d. Causes emissions from the stationary source which result in violations of, or interfere with the attainment and maintenance of, any ambient air quality standard; or
 - e. Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.
- (9 VAC 5-80-1210 F)
32. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
 - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
 - c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
 - d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130 and 9 VAC 5-80-1180)

33. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Director, Piedmont Region of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
 - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

Note: The GCCS has spring loaded fail safe valve which typically precludes excess emissions.

(9 VAC 5-20-180 B and 9 VAC 5-80-1180)

34. **Record of Malfunctions** - The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.

(9VAC 5-20-180 J and 9 VAC 5-80-1180 D)

35. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Piedmont Region of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours of the malfunction. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of the occurrence. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify Director, Piedmont Region in writing.

(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

36. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.

(9 VAC 5-20-180 I and 9 VAC 5-80-1180)

37. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)

38. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Piedmont Region of the change of ownership within 30 days of the transfer.

(9 VAC 80-1240)

39. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-80-1180)

State-Only Enforceable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

40. **Odor Management Plan:** The approved Odor Management and Control Plan describing the practices and technology that will be used to minimize off-site odors and to address odor complaints that may occur shall be an enforceable part of this permit. The plan shall incorporate the use of best available odor control technology that is appropriate for this landfill. The plan shall also describe procedures that will be implemented in response to citizen odor complaints or the detection of significant off-site odors by DEQ staff, including progressive steps that will be taken to reduce odors. A log of all odor complaints received and actions taken shall be kept and made available for inspection by authorized Federal, State or Local officials. The Odor Management and Control Plan shall be reviewed annually by the Facility and evaluated for the need and feasibility of new or modified odor control technology or practices. Results of the annual plan review, a modified plan (if applicable) and a copy of the log shall be submitted to the Piedmont Regional Office by the first day of March of each year.

(9 VAC 5-50-140, 9 VAC 5-50-260 and 9 VAC 5-80-1180)